

## 2009 N.C. Green Business Fund Grant Recipients

- **Aerofab Manufacturing Corp., Apex – \$45,435**  
*Factory Placement of Enhanced Medialess Indoor Air Quality Mist Eliminators in N.C. Metalworking Shops*  
North Carolina ranks eighth in the U.S. for number of metalworking facilities. Mists generated by metalworking machines contain hazardous materials and must be filtered to meet federal air quality standards. This project will place a new “green” filtration technology in large metalworking facilities in the state. This technology recovers almost all of the metalworking fluids generated in the form of mist while returning air to the plant that far exceeds federal air quality minimum standards.
- **Caldwell Community College and Technical Institute, Lenoir – \$81,000**  
*CCCTI Institute for Sustainable Technology Mobile Demonstration Lab*  
This project will turn a standard shipping container into a mobile demonstration lab that will introduce individuals, professionals, consumers and entrepreneurs to the benefits of energy efficiency and of the emerging green economy. The lab will be used for instructional and marketing purposes and will feature green building techniques and renewable energy demonstrations.
- **Centralina Council of Governments, Charlotte – \$85,000**  
*Greater Charlotte Region Biofuel Facility*  
“Brown” grease is waste oil from food preparation. It often is responsible for clogging sewers, causing overflows. In the Charlotte-Mecklenburg region, brown grease contributes to more than 55 percent of sewer overflows. The grant will help develop a Greater Charlotte Region Biofuel Facility that will turn brown grease from the region into biofuel that can be used by consumers.
- **Clean Marine Solutions, Wilmington – \$84,602**  
*Affordable Environmental Compliance Systems for Boat Yards and Marinas*  
Boatyards and marinas usually pressure-wash boat bottoms to remove marine growth and old anti-fouling paint. Anti-fouling paints, used to minimize marine growth on hulls, contain heavy metals such as copper that pollute waters and affect marine life, including seafood. This project will commercialize a system that captures the wastewater from pressure washing and removes almost all the copper while clarifying the water, which can be recycled and reused. This will help bring boatyards and marinas into compliance with the Federal Clean Water Act.
- **CPS Biofuels Inc., Raleigh – \$50,000:**  
*High Performance Biofuel Product Derived from Biodiesel Waste*  
This project develops a fuel additive made from glycerol, a waste product of biodiesel production. The additive improves fuel economy in gasoline and diesel engines by increasing octane.
- **EnSolve Biosystems Inc., Raleigh – \$50,000:**  
*Green Bilge Water Treatment System for Worldwide Applications*

The grant funds oil/water separator technology for small boats that uses bacteria to reduce/remove oil contamination from bilge water. This water collects below deck from rain and from waterways and is often contaminated with oil and other materials. If untreated and released back into waterways, it can result in pollution.

- **FLS Energy Finance LLC, Black Mountain – \$60,000:**  
*Large Scale Hot Water Implementation*  
FLS will provide clients with solar hot water installation and financing, reducing the upfront cost of solar power and allowing more consumers access to this green technology.
- **Innova Homes LLC, Asheville – \$51,160:**  
*Engineering and Impact Analysis of Hybrid Modular Home Manufacturing*  
The grant funds development of a hybrid green modular home that combines a new, energy- and material-efficient structural insulated panel with traditional modular home components.
- **InnovaTech Inc., Research Triangle Park – \$53,317:**  
*Cost-Effective Harvesting of Algae in Phytobioreactor Bio-fuel Systems*  
The grant funds development of a prototype phytobioreactor — a large tank for growing algae — to harvest algae for use in biofuel production. This project will increase the efficiency of algae-to-biofuels conversion.
- **Microcell Corp., Raleigh – \$80,000:**  
*Microcell Fuel Cell Demonstration*  
This project will supply emergency generator substations with fuel cell batteries as a more environmentally friendly alternative to existing acid cell batteries, which are more expensive, contain hazardous materials and have a shorter lifespan.
- **N.C. State University Solar Center, Raleigh – \$95,000:**  
*Attracting Investment through Removal of a Key Obstacle in the Solar Industry*  
The grant will support the Solar Center become an accreditation agency for solar thermal manufacturers. Currently, Florida is the only state providing certifications, resulting in a two-year backlog that limits companies from expanding their business and creating jobs.
- **Semprius Inc., Durham – \$99,486:**  
*Development of Silicone-on-glass Lens Array for Concentrator Photovoltaic (CPV) Modules*  
The grant funds development of a system that concentrates solar energy through a lens to a small, high-efficiency gallium arsenide solar cell. This reduces by 1,000 times the amount of expensive solar cell material needed and improves the overall efficiency of the system while reducing costs.
- **Vesture Corp., Asheboro – \$75,000:**  
*BioPCM: Beyond Insulation*  
Vesture Corp. will use the funding to ramp up production of a new home insulation product that uses phase-change materials. These materials are solid at room temperature, but liquefy and absorb and store heat when the temperature becomes warmer. When the temperature

drops, the material will solidify and give off heat, warming the house and reducing consumer energy costs.

- **VisibleEnergy Inc., Durham – \$40,000:**

- ***Home Energy Dashboard***

VisibleEnergy's technology will reduce the amount of energy used in individual households by monitoring overall energy use and specific appliances and behaviors that directly affect energy consumption. The technology calculates exactly how much energy can be saved.